

**COMPLETE TUBER PACKAGE  
FOR FARMERS  
BY  
VST SHAKTI  
POWER TILLER**



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## INTRODUCTION

### BEST IN THE FIELD FOR TUBER CROP

VST Shakti gives a guide for complete tuber package for farmers. It aims to cover complete process, agricultural implements required, key benefits of using VST tillers for cultivation and economics of tuber farming.



#### KEY FEATURES

- Rotary widths: 600 & 540 mm.
- Turning Radius: with brake 1.0 mt; without brake 1.5 mt
- Best for Inter cultivation – 1.22 mt & 1.53 mt width.
- Less soil compaction; very good tilling; 25% increase in yield and field coverage.
- Robust transmission assembly design, which is capable of taking extreme loads even on dry soil.

#### KEY BENEFITS

- First company to introduce Power tillers as farm machinery replacing manual farming.
- Easy maneuverability & light in weight.
- Unique Japanese design; easy availability of spares & service; good resale value.
- Established brand over decades in the farming community.

## FIELD PREPARATION

### CULTIVATOR

A Cultivator is used to break up the soil prior to sowing. It is drawn by a power tiller.



#### KEY FEATURES

- Tines / blades are designed for heavy duty working & rigidity.
- Straight type for dry land and 'J' type is recommended for wet lands.
- 5 tynes are provided in rigid type cultivators.
- 0.25 ~ 0.4 acres can be cultivated in 1 hour with average diesel consumption of 1.0 ~ 1.25 lts / hr of operation

#### KEY BENEFITS

- Rigid cultivator is used for tilling soil.
- Helps in preparing the soil for a new crop.
- Has high strength & rigidity.
- Tough in construction.



## FIELD PREPARATION

### ROTARY ASSEMBLY

A rotary assembly is a mechanized device used for breaking up the topsoil in the process of preparation before planting. Spinning blades are attached to the tiller that will spin and slice into the soil in order to create loose topsoil to make it ready for planting.



#### KEY FEATURES

- 18 tynes can be fitted for best performance in dry land.
- Straight tynes recommended for dry field.
- 0.3 ~ 0.45 acres of land can be covered in 1 hr with average diesel consumption of 1.0 ~ 1.25 lts / hr
- Depth of Tilling is 150 ~ 225 mm.

#### KEY BENEFITS

- Simple in construction with strong design appropriate for varied soil conditions
- The application includes : Soil conditioning, weed control, seedbed preparation & puddling in wet land..
- Most suitable for medium & small farmers and also for field preparation on both wet and dry land crops.
- Sturdy Construction
- Minimum load on Tiller.

## **FIELD PREPARATION**

### **PLOUGH**

A plough is a farming implement with one or more blades fixed in a frame, drawn by a power tiller over the soil to turn it over and cut furrows in preparation for planting seeds.



#### **KEY FEATURES**

- 0.2 ~ 0.35 acres of land can be ploughed in 1 hour
- Diesel consumption is 1.0 ~ 1.25 lts / hr

#### **KEY BENEFITS**

- This is well designed for ploughing the soil.
- Basic functions are inverting, breaking and raising the soil.
- Can be used in tough conditions
- Tills the soil which has deep roots, unwanted plants, shrubs and weeds.
- Shears are made of tough alloy steel, can be moved forward as and when wear and tear takes place due to usage in field

## FIELD PREPARATION

### RIDGER

The ridger is used for making ridges for row crops and for opening furrows for water flow.



#### KEY FEATURES

- Depth (adjustable) of the furrow is 250 to 300 mm
- Width (adjustable) of the furrow is 375 to 450 mm
- Covers 0.2 ~ 0.35 acres in 1 hour.
- Consumption of diesel is 0.75 ~ 1.25 lts / hr

#### KEY BENEFITS

- It consists of rectangular frame made of mild steel angle or channel section, 3 -point hitch assembly, shanks and ridger body.
- The share point is made from medium carbon steel or low alloy steel, hardened and tempered. Can be replaced with wear & tear.
- The ridger is operated in tilled soil, the share point penetrates in the soil, displaces it to both sides and a furrow is created.

## **HARVESTING**

### **POTATO REMOVER**

Potato remover is an attachment that harvests potatoes.



#### **KEY FEATURES**

- Potatoes can be removed in 2.5 bighas / 1.0 acre of land in 1 hour of operation
- Row to row distance is 600 mm
- Diesel consumption – 1.50 ~ 1.75 lts/hour
- Very easy to fit with the Hitch bracket & pin.
- After digging season is over, the attachment can be replaced with another attachment to the tiller.

#### **KEY BENEFITS**

- Very optimally designed for removing potatoes.
- This digs the potatoes by a digging web / shear plate and then lifts them up to the sieves – rods fixed at intervals on a belt conveyor
- The sieve separates the potato from the soil and allows soil to fall below on the ground.
- Potatoes along with stones, clod, haulm and rejected clod fall on the ground on the backside of the implement to be picked manually and separated.



## HAULAGE

### TRANSPORTATION



#### KEY FEATURES

- Trailer capacity is maximum 1.5 tons.
- Standard dimensions – 3.85 x 1.10 x 0.40 mts (L x W x H)
- Average consumption of diesel is 1.0 lts ~ 1.25 lts / hr.
- Trailers can be suitably modified for:
  - Garbage collection & transportation
  - A tanker of maximum capacity 1000 litres for carrying drinking water

#### KEY BENEFITS

- Primarily required for transporting manure, chemicals, implements, produce etc.
- Trailer with a mechanical brake is commonly used.
- Hydraulic tipping type can be made on specific request.
- Spraying pump can be fitted with modification for spraying application.



VST SHAKTI

## INDICATIVE COMMERCIAL OFFER – CUSTOM HIRING BY VST SHAKTI

SL. NO.	IMPLEMENTS	MRP (Rs.)	MRP (Rs.) as per SMAM Guideline
1	Cultivator	18275	10965
2	M B Plugh	8200	4920
3	Ridger	2500	1500
4	Potato Digger	45000	27000
5	Trailer	55000	55000
	<b>Total</b>	<b>128975</b>	<b>99385</b>
6	VST Shakti 130 DI Power Tiller	160000	96000
7	<b>Total Cost with PowerTiller</b>	<b>288975</b>	<b>195385</b>

Freight & taxes etc as applicable

Calculation as per SMAM (for subsidy) guidelines for assistance

## PAY BACK PERIOD

SL. NO	DESCRIPTION	FUEL EXPENSES (Rs/hr)	MAINTENANCE OF TILLER & WEAR/TEAR (Rs/hr)	LABOUR COST (Rs/hr)	TOTAL EXPENSES (Rs/hr)	HIRING COST (Rs/hr)	NET INCOME (Rs/hr)	WORKING FOR 1 SEASON (90 ACRES)	EARNING MRP (Rs.)	EARNING (Rs.) SMAM GUIDELINE
1	Cultivator	60	10	50	120	500	380	240	91200	91200
2	MB Plough	48	10	50	108	500	392	240	94080	94080
3	Ridger	60	10	50	120	450	330	240	79200	79200
4	Potato Digger	72	15	150	237	500	263	360	94680	94680
5	Trailer	48	15	50	113	175	62	360	22320	22320
<b>TOTAL INCOME (Rs.)</b>									<b>381480</b>	<b>381480</b>
<b>IF 80% IS ACHIEVED (Rs.)</b>									<b>305184</b>	<b>305184</b>
<b>TOTAL INVESTMENT (Rs.)</b>									<b>288975</b>	<b>195385</b>
<b>DEPRECIATION @ 15% (Rs.)</b>									<b>43346</b>	<b>29308</b>
<b>NETT INCOME (Rs.)</b>									<b>261838</b>	<b>275876</b>
<b>ROI</b>									<b>90.61%</b>	<b>141%</b>
<b>PAY BACK PERIOD</b>									<b>~ 1.0 SEASON</b>	<b>~ 0.75 SEASON</b>

Assumption - 100% is 1 season

## ASSUMPTIONS MADE

OPERATION	ACRES /DAY (8 HOURS)	ACRES /HOUR	NO. OF DAYS REQD FOR 90 ACRES	NO. OF HOURS
<b>Cultivator</b>	3	0.4	30	240
<b>Ridger</b>	4	0.5	23	180
<b>MB Plough</b>	4	0.5	23	180
<b>Potato Digger</b>	2	0.3	45	360
<b>Trailer</b>	2	0.3	45	360

- Cultivator & Rotary assembly maintenance after every season ~ Rs. 5000/-
- Diesel cost Rs. 48 / ltr is considered
- Recommend service of power tiller at the end of season (includes change of oil and filters) - Rs. 2000/-
- Salary towards labour Rs. 7500 / month for working 8 hours a day for 25 days
- Recommended maintenance/service of Generator, Water pump & Sprayer ~ Rs. 3000/-

Do follow us on:



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